

VII.—A Revision of the Fishes of the Genus *Elops*.

By C. TATE REGAN, M.A.

Synopsis of the Species.

- I. Lower jaw included, the whole of the præmaxillary band of teeth exposed when the mouth is closed.
- A. 78 or 79 vertebræ; 102 to 118 scales in a longitudinal series.
- 12 to 15 gill-rakers on the lower part of the anterior arch 1. *saurus*.
- 18 to 20 gill-rakers on the lower part of the anterior arch 2. *affinis*.
- B. 68 or 69 vertebræ; 94 to 98 scales in a longitudinal series; 12 to 15 gill-rakers on the lower part of the anterior arch.
1. Pectoral $\frac{3}{5}$ the length of head, extending a little more than $\frac{1}{2}$ of the distance from its base to the pelvics 3. *senegalensis*.
2. Pectoral $\frac{1}{2}$ or a little more than $\frac{1}{2}$ the length of head, extending a little less than $\frac{1}{2}$ of the distance from its base to the pelvics.
- Interorbital width 5 to $5\frac{1}{3}$ in the length of head; length of lower jaw nearly $\frac{2}{3}$ the length of head 4. *hawaiiensis*.
- Interorbital width $4\frac{1}{2}$ in the length of head; length of lower jaw a little less than $\frac{2}{3}$ the length of head .. 5. *australis*.
- II. Lower jaw projecting, covering the anterior part of the præmaxillary band of teeth when the mouth is closed.
- 63 or 64 vertebræ; 94 to 98 scales in a longitudinal series; 28 to 32 branchiostegals; 14 gill-rakers on the lower part of the anterior arch 6. *machnata*.
- 74 vertebræ; 74 to 83 scales in a longitudinal series; 24 to 26 branchiostegals; 17 to 19 gill-rakers on the lower part of the anterior arch 7. *lacerta*.

1. *Elops saurus*, Linn., 1766.

Argentina carolina, Linn., 1766, and *Elops inermis*, Mitch., 1815.

Depth of body nearly 6 in the length, length of head $3\frac{2}{3}$ to $4\frac{1}{3}$. Snout as long as or longer than eye, the diameter of which is $4\frac{1}{2}$ to 6 in the length of head; interorbital width $4\frac{2}{3}$ to $5\frac{1}{2}$ in the length of head. Maxillary extending beyond the eye; lower jaw included, the whole of the præmaxillary band of teeth exposed when the mouth is closed; length of gular plate from less than $\frac{2}{5}$ to $\frac{2}{3}$ that of the lower jaw, which is $\frac{3}{5}$ or a little more than $\frac{3}{5}$ of the length of head; 28 to 36 branchiostegals; 12 to 15 gill-rakers on the lower part of the anterior arch. 102 to 118 scales in a longitudinal series. Dorsal 23–26, with 18 to 20 branched rays; anal 15–16,

with 11 or 12 branched rays; pectoral $\frac{1}{2}$ or a little more than $\frac{1}{2}$ the length of head, extending $\frac{1}{2}$ or less than $\frac{1}{2}$ of the distance from its base to the pelvics; origin of pelvics a little nearer to base of caudal than to end of snout. Least depth of caudal peduncle $\frac{1}{3}$ the length of head. 78 or 79 vertebræ #.

Atlantic coast of America from the United States to Brazil.

Here described from eight specimens, 160 to 620 mm. in total length, from Wood's Hole, Cuba, St. Croix, and Rio Janeiro.

2. *Elops affinis*, sp. n.

Differs from the preceding species in having 18 to 20 gill-rakers on the lower part of the anterior arch, but is extremely similar to it in other respects. 79 vertebræ.

Pacific coast of Mexico, and probably from California to Ecuador.

Two specimens, 230 and 320 mm. in total length, from Mazatlan (*Jordan*) and Jalisco (*Buller*).

3. *Elops senegalensis*, sp. n.

Depth of body nearly 5 in the length, length of head $3\frac{3}{4}$ to 4. Snout as long as or longer than eye, the diameter of which is $4\frac{1}{3}$ to $5\frac{1}{4}$ in the length of head; interorbital width 5 to $5\frac{1}{3}$ in the length of head. Maxillary extending beyond the eye; lower jaw included, the whole of the præmaxillary band of teeth exposed when the mouth is closed; length of gular plate $\frac{1}{2}$ to $\frac{2}{3}$ that of the lower jaw, which is nearly $\frac{2}{3}$ that of the head; 30 to 33 branchiostegals; 12 to 14 gill-rakers on the lower part of the anterior arch. 94 to 98 scales in a longitudinal series. Dorsal 23–26, with 17 to 20 branched rays; anal 16–17, with 12 or 13 branched rays; pectoral $\frac{2}{3}$ the length of head, extending a little more than $\frac{1}{2}$ of the distance from its base to the pelvics; origin of pelvics equidistant from end of snout and base of caudal. Least depth of caudal peduncle more than $\frac{1}{3}$ the length of head. 69 vertebræ.

West Africa.

Three specimens, 170 to 320 mm. in total length, from St. Louis, Senegal (*Delhez*).

* The last three vertebræ included in my count are directed upwards, but have distinct and separate centra, which, however, are overlapped by the bases of the enlarged neural spines which support the upper caudal fin-rays, so that by some these three vertebræ might be reckoned together as *hypural*.

4. *Elops hawaiiensis*, sp. n.

Depth of body $5\frac{1}{2}$ in the length, length of head $3\frac{2}{3}$ to 4. Snout nearly as long as or a little longer than eye, the diameter of which is 4 to 5 in the length of head; interorbital width 5 to $5\frac{1}{3}$ in the length of head. Maxillary extending beyond the eye; lower jaw included, the whole of the præmaxillary band of teeth exposed when the mouth is closed; length of gular plate $\frac{2}{3}$ or more than $\frac{2}{5}$ that of the lower jaw, which is $\frac{2}{3}$ or a little less than $\frac{2}{3}$ that of the head; 27 to 31 branchiostegals; 13 or 14 gill-rakers on the lower part of the anterior arch. 96 to 98 scales in a longitudinal series. Dorsal 24, with 18 branched rays; anal 15-16, with 11 or 12 branched rays; pectoral a little more than $\frac{1}{2}$ the length of head, extending a little less than $\frac{1}{2}$ of the distance from its base to the pelvics; origin of pelvics a little nearer to base of caudal than to end of snout. Least depth of caudal peduncle about $\frac{1}{3}$ the length of head. 68 vertebræ.

Hawaii.

Two specimens, 220 and 400 mm. in total length.

This species is very close to *E. senegalensis*, but has the eye a little larger, paired fins shorter, &c.

5. *Elops australis*, sp. n.

Depth of body 5 in the length, length of head $4\frac{1}{4}$. Snout a little longer than eye, the diameter of which is 5 in the length of head; interorbital width $4\frac{1}{2}$ in the length of head. Maxillary extending beyond the eye; lower jaw included, the præmaxillary band of teeth exposed when the mouth is closed; length of gular plate a little less than $\frac{2}{3}$ that of the lower jaw, which is a little less than $\frac{2}{3}$ the length of head; 31 branchiostegals; 13 gill-rakers on the lower part of the anterior arch. 95 scales in a longitudinal series. Dorsal 24, with 18 branched rays; anal 15, with 11 branched rays; pectoral slightly more than $\frac{1}{2}$ the length of head, extending a little less than $\frac{1}{2}$ of the distance from its base to the pelvics; origin of pelvics equidistant from end of snout and base of caudal. Least depth of caudal peduncle nearly $\frac{2}{5}$ the length of head. 69 vertebræ.

New South Wales.

A single specimen, 330 mm. in total length, from Port Jackson.

6. *Elops machnata*, Forsk., 1775.

Elops capensis, Smith, 1845, and *Elops purpurascens*, Richards., 1846.

Depth of body 5 to $5\frac{2}{3}$ in the length, length of head $4\frac{1}{2}$ to

$4\frac{2}{5}$. Snout as long as or longer than eye, the diameter of which is $4\frac{2}{3}$ to $5\frac{1}{2}$ in the length of head; interorbital width $4\frac{1}{2}$ to $4\frac{2}{3}$ in the length of head. Maxillary extending beyond the eye; lower jaw projecting, covering the anterior part of the præmaxillary band of teeth when the mouth is closed; gular plate $\frac{3}{5}$ or a little less than $\frac{3}{5}$ the length of the lower jaw, which is more than $\frac{3}{5}$ that of the head; 28 to 32 branchiostegals; 14 gill-rakers on the lower part of the anterior arch. 94 to 98 scales in a longitudinal series. Dorsal 21–23, with 16 or 17 branched rays; anal 15–16, with 11 or 12 branched rays; pectoral $\frac{3}{5}$ the length of head, extending a little less than $\frac{1}{2}$ of the distance from its base to the pelvics; origin of pelvics a little nearer to base of caudal than to end of snout. Least depth of caudal peduncle $\frac{1}{3}$ to $\frac{2}{5}$ the length of head. 63 or 64 vertebræ.

From the Cape of Good Hope to China and Japan.

Here described from a Madras specimen of 350 mm. and one from the Cape measuring 680 mm. in total length. The latter is a more slender fish than the former, but seems to be the same species. Counts of scales, fin-rays, &c. in two small specimens (110 mm.) from Madras, and of stuffed examples from South Africa and China, are included in the description. Two skins from Dr. Kirk's collection, labelled respectively Lake Nyasa and Shiré River, may belong to this species.

7. *Elops lacerta*, Cuv. & Val., 1846.

Elops congicus, Bouleng., 1898.

This small species, reaching a length of 560 mm. in West-African rivers, agrees with the preceding in the structure of the mouth, but has fewer branchiostegals, more numerous gill-rakers, larger scales, vertebræ in greater number, &c.

VIII.—*Descriptions of Two new Species of Rhynchota from Bengal.* By W. L. DISTANT.

HETEROPTERA.

Fam. Saldidæ.

Subfam. SALDINÆ.

Valleriola cicindeloides, sp. n.

Greyish ochraceous, thickly shortly palely pilose; head, anterior lobe of pronotum, and four short longitudinal fasciæ